

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)
19. (Cancelled)
20. (Cancelled)
  
21. (New) A method of separating by means of an aqueous absorption liquid sulphur dioxide from a gas containing sulphur dioxide, said method comprising the steps of:
  - a. passing the gas containing sulphur dioxide through a contact zone;
  - b. mixing the gas containing sulphur dioxide with a liquid flowing out of an outlet box while the gas containing sulphur dioxide is passing through the contact zone;

- c. then passing the gas containing sulphur dioxide upwards through an essentially horizontal apertured plate arranged beside the outlet box and having a flowing layer of the aqueous absorption liquid provided thereon;
- d. feeding a coolant flow to the outlet box so that the coolant flow passes therethrough and flows out into the contact zone; and
- e. feeding to the essentially horizontal apertured plate an absorption liquid flow that is essentially independent of the coolant flow so that the flowing layer of the aqueous absorption liquid provided on the essentially horizontal apertured plate is thereby formed by the absorption liquid flow and is operative to effect the separation of sulphur dioxide from the gas containing sulphur dioxide.

22. (New) The method as claimed in claim 21 wherein the outlet box is elongated and extends along a lateral edge of the essentially horizontal apertured plate, and further comprising the step of passing the absorption liquid flow over the essentially horizontal apertured plate in a direction that is essentially parallel to the longitudinal direction of the outlet box.

23. (New) The method as claimed in claim 22 further comprising the steps of:

- a. collecting in a container containing liquid the coolant flow flowing out of the outlet box, the liquid surface of the liquid contained in the container being located at a level below the contact zone;
- b. passing the gas containing sulphur dioxide through a passage located under the outlet box and extending between the liquid surface of the liquid contained in the container and the outlet box; and
- c. controlling a parameter that is representative of the level of the liquid surface of the liquid contained in the container, and that is thus also representative of the height of the passage in such a manner that the average velocity of the gas containing sulphur dioxide in the passage is in the range of 5-35 m/s.

24. (New) The method as claimed in claim 23 further comprising the step of collecting in a common container the coolant flow flowing out of the outlet box as well as the absorption liquid flow flowing out of the essentially horizontal apertured plate.

25. (New) The method as claimed in claim 24 further comprising the step of feeding from the common container the coolant flow as well as the absorption liquid flow.

26. (New) The method as claimed in claim 25 wherein a hydrostatic liquid pressure is present in the outlet box, and further comprising the step of controlling by means of the coolant flow the ratio of the hydrostatic liquid pressure in the outlet box to the pressure difference between a first point located just before the contact zone and a second point located above the liquid surface in the outlet box in such a manner that the hydrostatic liquid pressure in the outlet box is greater than the pressure difference between the first point located just before the contact zone and the second point located above the liquid surface in the outlet box.

27. (New) The method as claimed in claim 21 further comprising the step of passing the flow gas essentially horizontally under the outlet box.

28. (New) A device for separating by means of an aqueous absorption liquid sulphur dioxide from a gas containing sulphur dioxide, said device comprising:

a. an inlet for the gas containing sulphur dioxide and an outlet for the gas following the separation of sulphur dioxide therefrom;

b. at least one essentially horizontal apertured plate having an upper side and mounted between said inlet and said outlet, said at least one essentially horizontal apertured plate being arranged so as to allow passage of the gas containing sulphur dioxide from below said at least one essentially horizontal apertured plate, said at least one essentially horizontal apertured plate further being arranged so as to enable a flowing layer of the absorption

liquid to be carried on said upper side of said at least one essentially horizontal apertured plate;

c. at least one outlet box arranged beside said at least one essentially horizontal apertured plate and so as to enable liquid to be passed thereby;

d. a distributing means arranged in said at least one outlet box to distribute liquid into the gas containing sulphur dioxide coming from said inlet before the gas containing sulphur dioxide is passed upwards and through said at least one essentially horizontal apertured plate;

e. a first pumping means for feeding a coolant flow to said outlet box; and

f. a second pumping means for feeding an absorption liquid flow that is essentially independent of the coolant flow to said at least one essentially horizontal apertured plate so that the flowing layer of the absorption liquid carried on said upper side of said at least one essentially horizontal apertured plate is thereby formed by the absorption liquid.

29. (New) The device as claimed in claim 28 further comprising a container arranged to collect the coolant flow flowing out of said outlet box, said container containing liquid, the liquid surface of the liquid contained in said container being located under said outlet box so as to thus form a passage between the liquid surface of the liquid contained in said container and said outlet box for the gas containing sulphur dioxide.

30. (New) The device as claimed in claim 29 further comprising a common container arranged to collect the coolant flow flowing out of said outlet box as well as the absorption liquid flow flowing out of said at least one essentially horizontal apertured plate.

31. (New) The device as claimed in claim 30 wherein the liquid surface of the liquid contained in said container extends both essentially under entirely said at least one essentially horizontal apertured plate and essentially under entirely said outlet box.

32. (New) The device as claimed in claim 31 wherein said at least one essentially horizontal apertured plate has the shape of a rectangular plate and has both a first lateral side edge extending parallel to said outlet box and a second lateral side edge extending perpendicular to said first lateral side edge of said at least one essentially horizontal apertured plate, said first pumping means as well as said second pumping means each consisting of a large pump arranged in succession along a line extending parallel to said second lateral side edge of said at least one essentially horizontal apertured plate.

33. (New) The device as claimed in claim 31 wherein said at least one essentially horizontal apertured plate has the shape of a rectangular plate and is divided into two parts by said second pumping means, said second pumping means when seen from above having the form of at least one elongate large pump and being arranged to distribute the absorption liquid flow over said two parts of said at least one essentially horizontal apertured plate, and wherein said at least one essentially horizontal apertured plate has a first lateral side edge, and wherein said outlet box is elongated and is arranged along said first lateral side edge of said at least one essentially horizontal aperture plate so as to form an essentially right angle to the longitudinal direction of said at least one elongate large pump of said second pumping means.

34. (New) The device as claimed in claim 33 further comprising a second essentially horizontal apertured plate having the shape of a substantially rectangular plate and being divided into two parts by said second pumping means, as seen from above said second pumping means being in the form of a second elongate large pump and being arranged to distribute the absorption liquid flow over said two parts of said second essentially horizontal apertured plate, and wherein said second essentially horizontal apertured plate has a first lateral side edge, and also comprises a second elongate outlet box arranged along said first lateral side edge of said second essentially horizontal apertured plate so as to form a substantially right angle to the longitudinal direction of said second elongate large pump, and an inlet gap

extending between said first outlet box and said second outlet box for incoming gas containing sulphur dioxide.

35. (New) The device as claimed in claim 29 further comprising a first container arranged to collect the coolant flow flowing out of said outlet, and a second container arranged to collect at least part of the absorption liquid flow flowing out of said essentially horizontal apertured plate.

36. (New) The device as claimed in claim 35 further comprising a third pumping means arranged to feed liquid from said first container to said second container through a conduit.

37. (New) The device as claimed in claim 35 wherein said first pumping means and said second pumping means are arranged to feed the coolant flow and the absorption liquid flow, respectively, from said second container.

38. (New) The device as claimed in claim 37 wherein said distributing means comprises at least one nozzle having at least one characteristic measurement selected from a minimum hole diameter and a minimum gap width of 1-8 cm.

39. (New) The device as claimed in claim 28 wherein said essentially horizontal apertured plate has an underside and said outlet box has a bottom located essentially on the same level as said underside of said essentially horizontal apertured plate.

40. (New) The device as claimed in claim 28 further comprising an inlet zone, an outlet zone, and an adjustable throttle valve, and wherein absorption liquid is conducted over said essentially horizontal apertured plate from said inlet zone to said outlet zone, and said adjustable throttle valve is operable for adjusting the thickness of the layer of absorption liquid being in said outlet zone.